Recreational Shellfish Harvesting and Vibrio:
Summer Harvest Precautions

Vibrio parahaemolyticus

During the summer of 2012, a number of U.S. states have faced illness outbreaks related to elevated levels of the naturally occurring bacteria *Vibrio parahaemolyticus* in shellfish. Elevated levels of *Vibrio* bacteria are related to the extremely warm water temperatures this year in many parts of the country. Consumers may be exposed to these pathogenic, or disease-causing, bacteria by eating raw or undercooked shellfish, including oysters, clams, lobster, and crab. In CT, the Department of Agriculture Bureau of Aquaculture, the shellfish authority for the state of CT, has taken precautionary measures to prevent illness outbreaks from occurring. These measures included testing for *Vibrio* in shellfish growing areas, and instituting precautionary closures in those areas which showed elevated levels of the bacteria. To date, there has been no outbreak of *Vibrio* illness or "vibriosis" related to shellfish harvested in CT.

Vibriosis symptoms include diarrhea, stomach cramps, nausea, vomiting, headache, fever, and chills. Symptoms usually appear 12-24 hours after eating infected shellfish, and can last two to seven days. Vibriosis can be life-threatening for immune-compromised people or those with chronic liver disease. Also at greater risk are people who regularly take antacids, heart or diabetes medication, or who've had antibiotic or cancer treatments recently. Ask your doctor if you have any questions about your individual risk from eating shellfish. Consumers who think they might have become ill from eating possibly contaminated raw or undercooked shellfish should consult their health care providers for appropriate follow-up and treatment.

When temperatures rise in the summertime, so do bacteria levels in shellfish, most notably *Vibrio parahaemolyticus* (*Vp*). The commercial shellfish industry is aware of this and follows strict refrigeration and handling requirements during warm summer months. Recreational harvesters also need to be aware of this risk when planning recreational shellfish harvest. Here are a few tips you need to know:

- **Harvest only from areas that you have a permit from** (with the exception of Milford for which no permit is necessary, just check the hotline at 203-874-0696 Option 4) and harvest only from areas that are open
- **Always check the status of the shellfish area** you want to harvest by calling the local shellfish hotline. Hotline numbers can be found at: http://www.ct.gov/doag/cwp/view.asp?a=3768&q=478084
- **Harvest as soon as possible after the tide goes out** (at the beginning of the tide cycle instead of at the end so that flats have been exposed for as little time as possible).
- **Do not harvest oysters that have been exposed to direct sunlight** for more than two hours.
- **Place shellfish under refrigeration or on ice immediately** after harvest.
- **Thoroughly cook your shellfish: the internal temperature must reach 145°F for 15 seconds.** Thorough cooking **does** destroy*Vp*, but barbequing oysters or steaming clams just until they open will not kill the bacteria. Follow the "Cooking Shellfish" guidelines below to make sure you are cooking them long enough.

Recreational Shellfish Harvesting:
Safe handling, storing, and cooking practices

Handling Shellfish

Keep shellfish cool after harvesting. If the temperature of shellfish is allowed to rise, bacteria will grow and the shellfish will become unsafe to eat.

Storing Shellfish

• **Fresh shellfish in the shell.** All fresh shellfish should be stored in an open container in the refrigerator. Place a damp towel on top to maintain humidity. Never store shellfish in water. They will die and may spoil. Shellfish that are open and don't close when tapped are dead. Throw them out. **Storage times for shellfish vary:**

- **Shellfish that close their shells completely** can be stored for up to seven days. This includes oysters, littlenecks, butter clams, and cockles. *Exception:* **Mussels** can be stored for three to four days.
- **Shellfish that cannot completely close their shells** can be stored for three to four days. This includes softshell clams and razor clams.
- **Shucked Shellfish.** Shellfish removed from their shells should keep in a refrigerator for up to three days. In a freezer, they should keep for up to three months.
- **Cooked Shellfish.** Cooked shellfish should keep in the refrigerator for up to two days and in a freezer up to three months.
- **Thawed Shellfish.** Shellfish taken from the freezer and thawed in a refrigerator should keep for up to two days. Once thawed, do not refreeze.

Cooking Shellfish

To ensure proper food safety, shellfish must be cooked to an internal temperature of at least 145°F. Since it is often impractical to use a food thermometer to check the temperature of cooked shellfish, here are some tips and recommended ways to cook shellfish safely:

- **Shucked shellfish** (clams, mussels and oysters without shells) become plump and opaque when cooked thoroughly and the edges of the oysters start to curl. The Food and Drug Administration (FDA) suggests boiling shucked oysters for 3 minutes, frying them in oil at 375° F for 10 minutes, or baking them at 450° F for 10 minutes.
- **Clams, mussels and oysters** in the shell will open when cooked. The FDA suggests steaming oysters for 4 to 9 minutes or boiling them for 3 to 5 minutes after they open.
- **Scallops** turn milky white or opaque and firm. Depending on size, scallops take 3 to 4 minutes to cook thoroughly.
- **Boiled lobster** turns bright red. Allow 5 to 6 minutes; start timing the lobster when the water comes back to a full boil.
- **Shrimp** turn pink and firm. Depending on the size, it takes from 3 to 5 minutes to boil or steam 1 pound of medium size shrimp in the shell.

Information on harvest, handling, storing and cooking excerpted from the WA State Department of Public Health Document: Recreational Shellfish Harvesting: Safe handling, storing, and cooking practices. http://www.doh.wa.gov/Portals/1/Documents/4400/332-072-RecHarvest.pdf